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Cotton Fiber and Processing Test Results

CROP of

1977



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38122 December 30, 1977

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1977

Discussion of Test Results

Southwestern short staple cottons tested through December 23 are longer, more uniform and finer than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Fiber strength is stronger at both zero and 1/8" gage tests. Picker and card waste is lower. Yarns spun from these samples are stronger. Appearance grades are slightly lower. The average spinning potential yarn number is much higher than it was at the same time last season.

Average results for all medium staple cottons tested show fibers to be longer, more uniform and coarser than a year earlier. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are higher.

Medium staple samples tested from the Southeast show about the same fiber characteristics as a year ago. Picker and card waste is lower. Yarns spun from these samples show weaker yarn strength than last season. Appearance grades are lower. The spinning potential is lower.

South Central medium samples tested are longer, more uniform and coarser than a year ago. Fiber strength is weaker at zero gage strength tests. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are higher.

Southwestern medium staple samples tested to date are longer, more uniform and stronger at zero gage than a year ago. Picker and card waste is lower. Yarns spun from these samples are weaker and have lower appearance grades. Yarn imperfections are lower.

Medium staple samples tested from the West are slightly shorter, more uniform and stronger than last season. Shirley Analyzer nonlint content is higher, but picker and card waste is lower this season. Yarns spun from these samples have lower yarn appearance grades. Yarn imperfections are higher.

Southeastern area long staple samples are shorter and coarser than a year ago. Both Shirley Analyzer and picker and card waste are higher than a year ago. Yarns spun from these samples are weaker. Yarn imperfections are fewer. The average spinning potential is lower.

South Central long staple samples tested are longer, more uniform and coarser than a year ago. Both Shirley Analyzer nonlint content and picker and card waste are higher. Yarns spun from these samples are weaker and have higher imperfections than a year earlier. Spinning potential is higher.

Long staple samples tested from the West show fibers to be shorter, less uniform and coarser than a year ago. Shirley Analyzer nonlint content is higher, but picker and card waste is lower. Yarns spun from these samples are weaker. Yarn imperfections are lower. Spinning potential is lower.

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These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.^{1/} These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

^{1/} Summary of Cotton Fiber and Processing Test Results, Crop of 1976, USDA, AMS Cotton Division, June 1977.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 23, 1977

Staple group Area, and Crop year	Lots tested	No.	Fiber test results						Processing test results					
			Fibrograph		Mike fine- ness unif.		S A nonlint waste		P & C waste		Yarn quality		Spin. Potent.	
			2.5% span	50/2.5 unif.	Zero gage	1/8" gage	Skein str.	Appearance	Imperf- actions	Index No.	22s Carded Yarn	Yarn No.		
Short Staple:														
Southwest														
1976	36	0.96	45	4.4	85	21	3.3	7.1	87	112	14	38		
1977	81	0.99	46	4.2	88	22	3.2	5.4	100	109	13	48		
Medium Staple:														
Southeast														
1976	45	1.08	45	4.6	85	23	3.1	6.4	106	98	20	56		
1977	36	1.08	45	4.7	86	22	3.2	6.1	96	92	21	50		
South Central														
1976	119	1.08	44	4.2	88	23	2.7	6.3	108	99	17	56		
1977	123	1.11	45	4.6	86	23	3.5	6.0	104	95	22	57		
Southwest														
1976	31	1.06	45	4.1	82	22	3.3	6.5	104	96	22	56		
1977	47	1.08	46	4.2	86	22	3.2	5.7	100	90	19	54		
West														
1976	56	1.12	45	4.2	90	25	2.2	5.7	120	90	19	67		
1977	81	1.11	46	4.3	94	26	2.6	5.3	119	86	21	68		
U.S. Average														
1976	251	1.08	45	4.2	87	24	2.7	6.2	110	96	19	58		
1977	287	1.10	46	4.5	88	23	3.2	5.8	106	91	21	59		
Significant difference 2/ 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3		

Based on a limited number of samples of modal quality.
Minimum differences considered to be significant for comparisons in this table.

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2/

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through December 23, 1977
 1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results						
		Length Span	Unif. gage	Mike Zero gage	Strength 1/8"	SA Non- lint	P&C Waste	Comber Waste	Strength		Yarn Quality		Imprfctns carded	
									carded	combed	carded	combed		
No.	No.	In.	Pct.	Rdg.	Mpsi G/tex	Pct.	Pct.	Pct.	Lbs. 22s	Lbs. Carded	Indx Carded	Indx & Combed	Yarn No.	No.
Long Staple:														
Southeast														
1976	11	1.15	45	4.3	87	25	3.1	6.7	15.8	116	137	103	115	21
1977	12	1.13	45	4.8	88	23	3.5	7.1	*	99	*	102	*	18
South Central														
1976	3	1.12	42	3.7	91	26	3.4	6.8	20.3	109	137	97	103	13
1977	3	1.16	45	4.5	92	24	4.3	7.2	*	106	*	97	*	24
West														
1976	1	1.20	48	3.8	89	26	2.9	6.4	11.8	147	162	90	100	30
1977	6	1.18	47	4.1	92	27	3.2	6.0	*	130	*	92	*	24
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2
2/										2(50s)	2(50s)	5	5	2
*														3

Based on a limited number of samples of modal quality.
 Minimum differences considered to be significant for comparisons in this table.
 Combed data not available.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number		Fiber Test Results						Processing Test Results - Carded Yarns					
No	Grade	Staple	Digital Fibrograph	Mike	Fiber Strength	Elong- at'n 1/8"	S.A. Non- lint	Color Raw Stock	P & C	Strength	Elongation	Appearance Index	Imperfec'tn's
	Name & Code	Staple	2.5% span	Unif.	Zero Gage	1/8"	Gage	Yel	Waste	8s or 22s or 27 tx	8s or 22s or 27 tx	8s or 22s or 27 tx	Spin. Poten- tial
		32s	In	Pct	Rdg	Mpsi	Gtex	Pct	Pct	Lbs	Lbs	Pct	No
SOUTHWEST AREA													
NORTHWEST TEXAS													
AMHERST	31	31	0.94	48	5.3	83	21	6.6	1.7	0	3	4.5	286
2 MID	31	31	0.98	45	4.5	89	22	7.1	2.0	1	3	4.7	294
3 MID	31	31	0.98	45								5.7	7.5
NEWCASTLE	32	32	0.97	45	4.1	86	20	7.2	2.7	2	3	4.8	285
												91	91
												7.0	7.0
PADUCAH	31	32	1.02	47	4.5	86	22	7.1	2.7	1	4	4.6	299
2 MID	31	32	1.01	46	4.5	88	22	7.1	2.9	1	3	4.6	312
3 MID LT SP	32	32	1.02	43	3.8	81	21	7.0	2.8	1	3	5.6	293
PETERSBURG	32	32	1.02	43								90 PERCENT	97
												7.5	7.5
RALLS	32	32	1.05	43	3.3	83	22	7.1	3.1	0	3	4.9	303
3 MID LT SP	32	32	1.05	43								75 PERCENT	102
SNYDER	31	31	0.98	44	4.0	88	21	6.2	2.7	0	3	4.4	294
												85 PERCENT	99
												7.3	7.3
												5.8	120
												100	100
												28	16
												No	No
												No	No

1/ Cotton stuck to processing rolls

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Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number		Fiber Test Results								Processing Test Results - Carded Yarns								
No	Grade	Stple	2.5% span	Digital Fibrograph	Mike Zero Gage	Fiber Strength 1/8"	Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock Gra	P & C Waste	Strength	Elongation	Appearance Index	Imperfect's ns	Spin. Poten- tial			
Name & Code											22s or 50s or 27 tx							
32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	
SOUTHEAST AREA																		
ALABAMA MONTGOMERY	3 LM	34	1.16	45	4.1	80	22	8.0	3.4	3	4	5.8	104	35	6.3	4.8	7.0	
GEORGIA BOSTWICK	2 SLM SP	34	1.03	45	4.4	83	21	6.2	4.5	5	5	7.1	93	29	5.5	4.2	8.0	
SOUTHWEST AREA																		
NORTHWEST TEXAS LUBBOCK	4 MID	34	1.07	44	4.2	87	22	6.9	2.8	0	3	5.4	105	33	5.9	4.3	8.0	
WEST AREA																		
ARIZONA BUCKEYE	3 SLM	35	1.09	46	4.7	90	24	6.7	3.7	1	3	5.3	109	36	5.9	4.5	9.0	
BUCKEYE	2 SLM	34	1.08	46	5.0	87	22	6.1	2.3	1	3	5.1	97	32	5.4	3.8	100	
MARANA	2 SLM	35	1.11	46	4.5	83	23	8.0	2.8	2	2	4.5	105	34	6.4	4.9	9.0	
MARICOPA	2 SLM	34	1.09	44	4.7	86	24	6.7	3.1	2	3	5.3	99	31	5.8	4.4	8.0	
MOHAVE VALLEY	2 MID	31	34	1.10	42	4.4	91	20	5.3	2.3	0	2	6.5	92	28	4.8	3.5	100
QUEEN CREEK	2 MID	35	1.13	46	5.1	88	23	6.8	1.7	0	3	5.1	108	34	5.8	4.3	100	
ROLL	3 SLM	41	35	1.15	45	4.3	89	23	6.0	3.2	1	2	6.6	102	31	5.4	3.9	8.0

* 100% selected for tests, less than 100% in the area.
 L/ Cotton stuck to processing rolls.

Table 3--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977--(continued)

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